980/1

NEWARK PUBL'C LIBRARY

SEP 12 1980

U. S. GOVT. PUBS.
DEPOSITORY 376

ENVIRONMENTAL PROTECTION NEWSLETTER

Winter 1979-80

DEPARTMENT OF TRANSPORTATION — UNITED STATES COAST GUARD

TD 5.28/3:

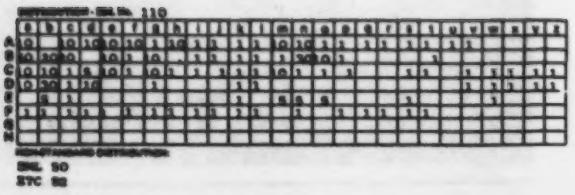
ENVIRONMENTAL PROTECTION NEWSLETTER

RADM WAYNE E. CALDWELL
Office of Marine Environment and Systems

CAPT CHARLES R. CORBETT
Marine Environmental Protection Division

The Environmental Protection Newsletter is an official medium for informing Coast Guard personel of developments and matters of general interest in the marine environmental protection field. This publication is also distributed to federal and state agencies, schools, industry and individuals who have expressed an interest in this area. This publication is not authority for official action and is non-record material. Questions and comments on items presented in the newsletter and submissions for publication are encouraged and may be mailed to:

Commandant (G-WEP-4/12)
Attn: PAC R.S. Griggs
U.S. Coast Guard
Washington, D.C. 20593



IN THIS ISSUE OF ENVIRONMENTAL PROTECTION NEWSLETTER...

- OFFICE OF MARINE ENVIRONMENT AND SYSTEMS SEES TOP LEVEL CHANGES--New Chief and Deputy Chief for Marine Environment and Systems, (G-W) and a new Division Chief in Marine Environmental Protection..... Page 4
- IMCO GOALS--The UN agency concerned with maritime affairs and its responsibilites and relationship to the Coast Guard..... Page 5
- DEPARTMENT OF LABOR JOINS NRT--The Occupational Safety and Health Administration (OSHA) joins the National Response Team..... Page 5
- CAPT CORBETT SPEAKS BEFORE SENATE COMMITTEES--Text of statement to the Committee on Commerce, Science and Transportation and the Subcommittee on Energy Resources and Materials Production..... Page 6
- DECLARATION OF FEDERAL SPILLS AND USE OF REVOLVING FUND--A discussion on how spills become "federal" and use of federal funds..... Page 12
- CHEMICAL RESPONSE DATA INCLUDED IN "SKIM" INVENTORIES--Analytical labs, industrial hygienists and toxicologists on computer inventories..... Page 14
- ON SITE OIL SENSORS--Some testing complete, final system and field tests expected by 1982..... Page 15
- CONTINGENCY PLAN OUTLINES FEDERAL RESPONSE--A brief outline of the National Oil and Hazardous Substances Pollution Contingency Plan..... Page 15
- PORTS AND TERMINALS MAY SOON HAVE TO FACILITATE DISPOSAL--Oily and noxious chemical wastes generated by ships may be disposed of with aid of ports and terminals..... Page 16
- IXTOC I--A MASSIVE RESPONSE TO MASSIVE SPILL--The Bay of Campeche oil well blowout and subsequent pollution sparks massive response..... Page 19
- CONTACTS FOR NAVY SALVAGE ASSISTANCE--Handling some incidents as salvage cases from the beginning can be helpful..... Page 21
- EPA PUBLISHES "REPORTABLE QUANTITIES FOR HAZARDOUS SUBSTANCES--A look at the events leading up to the establishment of reportable quantities..... Page 22
- NATIONAL RESPONSE CENTER EXPANDS WITH INCREASED WORKLOAD--The NRC reports on their two phase expansion program..... Page 24
- ELECTRONIC SURVEILLANCE OF OCEAN DUMPING WILL REDUCE AIR PATROLS, SHIPRIDING--Regulations on Ocean Dumping Surveillance System expected by mid-1980..... Page 25
- PUBLIC INFORMATION ASSIST TEAM UPDATE--Team assists OSCs on a variety of pollution incidents..... Page 26
- NATURAL OIL SEEPAGE AND FEDERAL RESPONSIBILITY--Decisions on an age-old problem should be made on a case by case basis..... Page 27

ON THE COVER: The 336-foot barge KONA lies aground just north of Coast Guard Light Station Point Bonita near San Francisco. KONA and another barge, the AGATTU, ran aground after a towing line parted during a fierce storm on the morning of December 31, 1979. (Coast Guard photo by Photojournalist Bill Ball)

MARINE ENVIRONMENT AND SYSTEMS SEES TOP LEVEL CHANGES

Several important changes have taken place in the Office of Marine Environment and Systems (G-W) since the last issue of the Marine Environmental Protection Newsletter.

Rear Admiral Wayne E. Caldwell assumed the position of Office Chief in June, 1979, taking over from CAPT Frederick P. Schubert who was Acting Chief following the retirement of RADM Winford W. Barrow. RADM Caldwell was formerly Commander of the Second Coast Guard District. CAPT Schubert moved on to become Chief of Staff in the Third Coast Guard District.

Also in June, CAPT Kenneth G. Wiman took over the post of Deputy Office Chief from Acting Deputy CAPT Charles S. Niederman. CAPT Wiman reported in from Philadelphia where he was Captain of the Port and Commanding Officer, Base Gloucester.

Left: RADM Caldwell. Above right: CAPT Wiman. Lower right: CAPT Corbett.

Captain Charles R. Corbett moved up from Chief, Environmental Coordination Branch, in the Marine Environmental Protection Division, to head that division in May, 1979, relieving CAPT John R. Kirkland.

A native of Springfield, Ohio, RADM Caldwell graduated at the head of his high school class and was active in track and football. After a year at Ohio State University he served in the Army for two years and then entered the Coast Guard Academy in July, 1944. After graduation he served in a variety of billets including duty aboard the Cutters BARATARIA, HEMLOCK (XO & CO), BALSAM (XO), KUKUI (XO) and CHASE (CO). Shore assignments included tours at the Coast Guard Academy (including Commandant of Cadets and Assistant Superintendent), Base Boston, Eleventh District Office (oc), and Coast Guard Headquarters (Chief, Officer Personnel Division, and Deputy Chief, Office of Marine Environment and Systems). RADM Caldwell attended the Naval Postgraduate School, and graduated from the National War College, simultaneously receiving a Master's degree in International Relations from George Washington University. He was appointed Rear Admiral and assumed command of the Second Coast Guard District in June 1975.

Captain Wiman was born in Kearny, N.J., and graduated from North Arlington (N.J.) High School. He then entered the Coast Guard Academy and graduated in 1952. Four successive sea tours, on the Cutters RAMSDEN, MACKINAC, CAMPBELL, and MENDOTA followed. He then attended Rensselaer Polytechnic Institute, earning a Bachelor of Civil Engineering Degree. His shore assignments have included Base Ketchikan, Seventeenth District Office (ecv), Base Galveston (XO), the Academy (Chief, Physical Plant), four positions in headquarters(includes Assistant Chief, Civil Engineering Branch; Chief, Bridge Division; and Manager, Deep Water Ports Project), and Captain of the Port, Philadelphia/ CO, Base Gloucester.

Captain Corbett graduated from the Oklahoma Military Academy and enlisted in the Coast Guard in November, 1955. He was commissioned in March, 1958 and served on a number of vessels, commanding the Cutters OAK and RED BEECH. While he was on duty in San Juan, P.R., and the Virgin Islands, the Coast Guard responded to the massive OCEAN EAGLE oil spill. CAPT Corbett served as a Coast Guard pre-designated on-scene coordinator for oil and hazardous substance spills in the Great Lakes for three years. Subsequently, he was the Coast Guard's Chief of Marine

READEX

Environmental Protection in the Great lakes and served as Chairman of the Regional Response Team and the U.S.-Canadian Joint International Response Team on seven major spills, including the NEPCO 140 incident.

CAPT Corbett has been active in the Intergovernmental Maritime Consultative Organization (IMCO), has published several papers in the MEP field, and currently serves as vice-chairman of the NRT.

OSHA JOINS NRT

The Department of Labor, specifically the Occupational Safety and Health Administration (OSHA), has recently become a member of the National Response Team. In doing so, they agreed to designate personnel to represent OSHA at the regional level, on the various Regional Response Teams and on OSCs local response teams when requested by the OSC. With the designation of hazardous substances under the FWPCA, and increased involvement in chemical spills and hazardous waste sites, the OSHA representative should be very valuable in future cases. If the regional OSHA representative is not already participating in RRT meetings, RRT chairmen may wish to contact that agency and inquire into the designation of an RRT member.

IMCO GOALS--SAFETY AT SEA, PROTECTION OF MARINE ENVIRONMENT

By: LT George Santa Cruz
Environmental Coordination Branch

The Intergovernmental Maritime Consultative Organization, or IMCO, is the specialized agency of the United Nations concerned with maritime affairs. Its interest lies mainly in shipping engaged in international trade. IMCO's main objective is to facilitate cooperation among governments on technical matters affecting international shipping, in order to achieve the highest practicable standards of maritime safety and efficiency of navigation. The organization has a special responsibility for safety at sea, and for the protection of the marine environment through prevention of pollution of the sea caused by ships and other craft.

In November 1973, the IMCO Assembly voted to establish the Marine Environment Protection Committee (MEPC) as a permanent technical body of the organization. In general, the MEPC is responsible for considering measures to implement and enforce international conventions concerned with the prevention and control of pollution from ships and to provide for the dissemination of scientific, technical, and other practical information on the prevention of marine pollution.

The U.S. delegate to the MEPC is Chief, Office of Marine Environment and Systems. The alternate delegate is Chief, Marine Environmental Protection Division. Other members of the U.S. delegation are primarily experts who deal with marine environmental protection issues domestically on a day to day basis and are therefore best qualified to negotiate these matters.

There is a strong functional relationship between the Coast Guard's domestic responsibilities with respect to marine environmental protection and the work of IMCO and the MEPC. As a result of this relationship, the Commandant chairs the U.S. National Committee for the Prevention of Marine Pollution (NCPMP), a subsidiary of the Department of State's Shipping Coordinating Committee. This advisory committee is responsible for the development of all U.S. policy for MEPC discussions and negotiations on marine pollution.

Provision for industry and citizen input is provided through meetings of the NCPMP. These meetings are announced in the Federal Register and are held prior to each session of the MEPC. The responsibilities of the NCPMP are: (a) to ascertain the views of interested government departments and agencies, industry associations and the private sector, (b) to make recommendations for the guidance of U.S. delegations to the MEPC and (c) to coordinate the U.S. position on items to be discussed at MEPC.

In addition to the MEPC, the Coast Guard is actively involved in the work of the IMCO Assembly, Council, 14 other committees and subcommittees and numerous working groups.

STATEMENT OF CAPT CHARLES R. CORBETT
CHIEF, MARINE ENVIRONMENTAL PROTECTION DIVISION
OFFICE OF MARINE ENVIRONMENT AND SYSTEMS
UNITED STATES COAST GUARD
BEFORE THE

SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION
AND
SUBCOMMITTEE ON ENERGY RESOURCES AND MATERIALS PRODUCTION
DECEMBER 5, 1979

Good morning Mr. Chairman I am Captain Charles Corbett, Chief, Marine Environmental Protection Division of the Coast Guard's Office of Marine Environment and Systems. I have been associated with the Federal response program in one form or another almost since its inception. During this time I have found the response mechanism laid out by the National Contingency Plan to be quite effective and, although I was not involved in its initial development, I must congratulate those who were, as the success of the Plan is testimony of the forethought and thoroughness of its developers. I must add here that one of the key elements in that development was Mr. Ken Biglane (EPA). Now I don't claim that the Plan is perfect, but it is darn good, and it is good because the process is dynamic in that we are continually learning from our experience, and translating those experiences into improvements in the Plan. As Mr. Biglane has indicated in previous testimony a number of changes are even now planned and indeed, implemented in part. I'm sure additional fine tuning will become necessary in the future, but still the mechanism is sound and I consider it a privilege to have the opportunity to be associated with it. Since Mr. Biglane has already addressed the national response mechanism, I would like to deal primarily on defining our ability to deal with oil pollution incidents.

There are normally three operational phases to a pollution response incident. The first actions taken, whenever possible, are to attempt to reduce the amount of oil that will be spilled. Steps are then taken to prevent or control the spread of oil to minimize the size of the affected area. Finally, when possible the contained oil is removed from the water surface with the aid of mechanical devices. Techniques for redistributing or breaking down the oil are sometimes used instead of mechanical removal. removal.

Actions to reduce the amount of oil which might be spilled during an incident usually involve shutting off a ruptured well, pumping oil from a ruptured tank or, from a sound tank to help refloat a stranded vessel and avoid pollution. It may also be desirable to sometimes fill the tanks of a vessel with water to place it on the bottom so that it may better sustain the weather. The vessel would then be refloated and offloaded when the weather subsided. By mutual agreement terminating spills at the source of offshore wells is the responsibility of the U.S. Geological Survey and I will therefore not address that problem. Subsequent cleanup is a Coast Guard responsibility and would be performed as I will describe later. In the case of a ship, its normal pumping system or a portable emergency

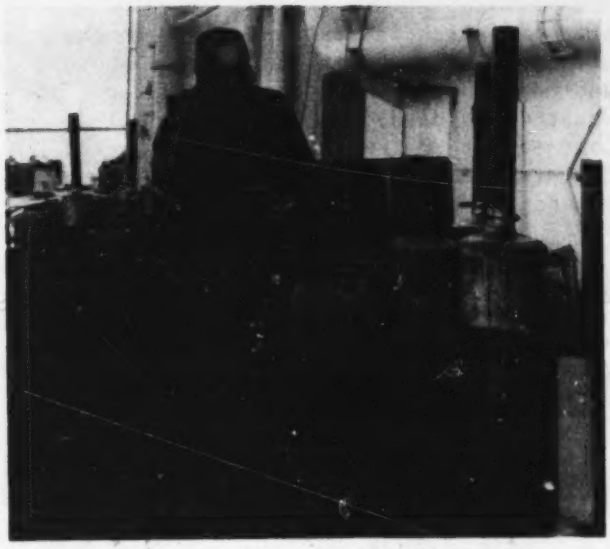
offloading system may be used to accomplish oil transfer. Although a ship's pumping system usually operates eight to ten times faster than portable units, the ship's installed unit may be rendered inoperative by the vessel casualty and usually cannot be counted on.

The Coast Guard-developed emergency offloading system, commonly referred to as ADAPTS, and similar commercial systems are representative of the state of the art. These systems are air transportable, and can pump 1,000 to 2,000 gallons per minute of a typical crude at moderate temperature.

Two basic limitations are involved with the portable offloading units, insufficient capacity and inability to pump highly viscous oils. Although the use of larger tankers makes it desirable to have portable pumps with higher capacity, there appears to be little likelihood for developing higher capacity portable pumps that will fit through normal tank openings. The other problem is that heavy residual oils become essentially nonpumpable when cooled to temperatures normally found in the northern portions of the country during winter. Although the capability to handle large volumes of cooled heavy oils does not exist, it appears that it can be developed.

A major problem in conducting offloading operations is finding a vessel to receive the offloaded oil. Past experiences have indicated that it can take from 12 to 30 hours to find such a vessel. While state of the art air transportable rubber bladder bags can hold about 250,000 gallons, they are difficult to handle and too small to serve as other than a stop gap measure. About the only economically feasible way to address this problem is through local planning efforts, by developing close liaison with commercial operators and tanker brokers so that the required tank vessels will be made available in a minimum of time.

Several major problems may be encountered when attempting to offload a distressed or leaking vessel. First the integrity of a tank vessel, even one in good repair, can be jeopardized if liquid loads are removed without regard to the stresses placed on the vessel during the unloading process. When the vessel is damaged, such actions become even more critical. Unless the ship's plans and stability information are readily available, it is not possible to develop a safe offloading plan in a minimum of time. Even if the engineering plans and drawings are available, it is difficult to immediately assess the condition of a vessel to determine what options exist in combatting the problem. This is presently made more difficult by the lack of a method to make quick assessments of a vessel's damaged condition. Likewise, once a decision is made, its implementation may require laying heavy moorings or performing equally time consuming work. To improve this situation we are considering a central dive team to function as part of the National Strike Force. The team would be on standby for rapid deployment to the scene of an incident and it will be prepared to make rapid hull surveys to obtain the information that a salvage master needs to make a quick visceral type determination of the vessel's condition. The team will also be able to apply minor patches to reduce product flow. However, both dive team and offloading operations personnel are always limited by safety considerations.



ADAPTS in operation aboard a tank ship.

(continued)

An oil slick is contained through the use of floating booms that extend above and beneath the surface of the water. The Coast Guard-developed Open Water Oil Containment System is representative of the state of the art in open water boom. Recent use of the barrier during the IXTOC I blowout indicates that the boom functions satisfactorily in sea states approaching ten to twelve feet in height. However, no barrier can be expected to recover all oil that may be spilled.

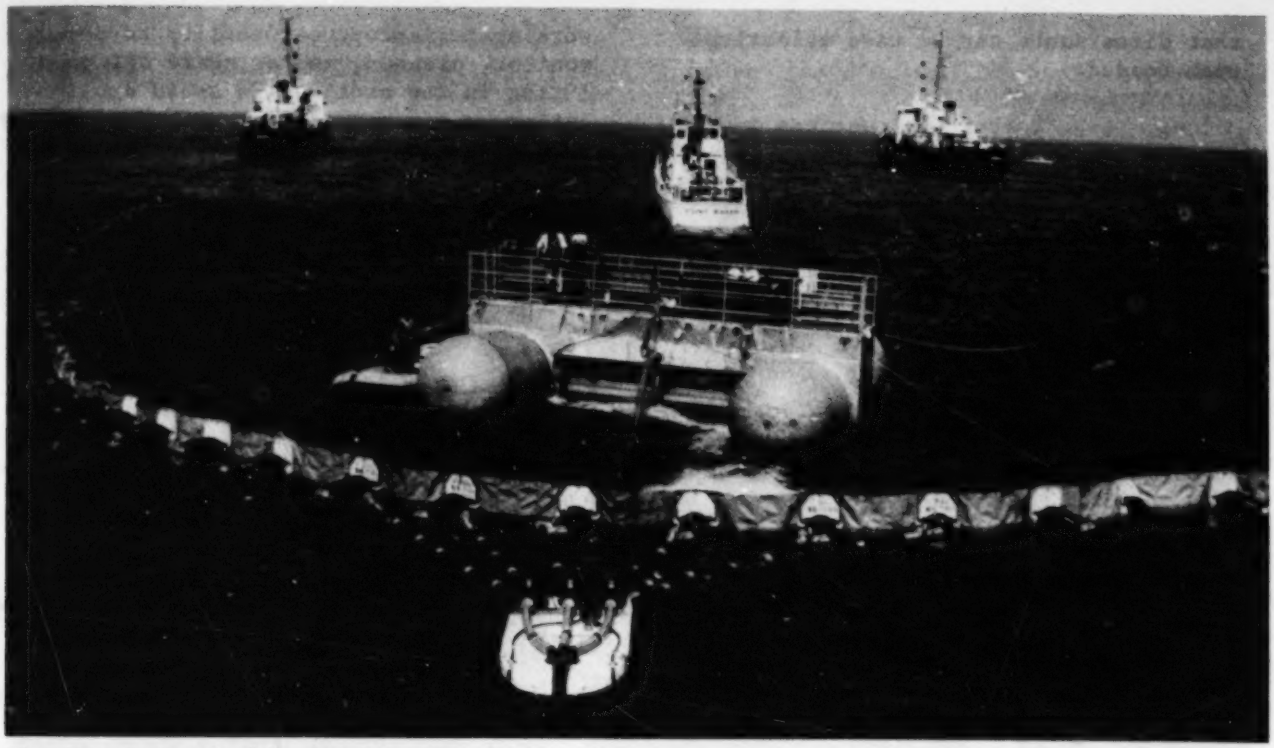
Ongoing research indicates that there may be a sea condition beyond which all of the spilled oil will be naturally dispersed into the water column because of the mixing action which is caused by wind and wave action. Results thus far indicate that mixing may begin with wind driven seas as low as three feet, and be essentially complete for most oils when the wind driven seas exceed 10 to 12 feet. These results appear to indicate that no major improvements in existing oil containment capabilities are likely to occur.

Techniques have been developed whereby booms can be used to deflect or slow down the spread of oil in areas of fast current. There is limited prospect of a real breakthrough that would enable individual booms to be more effective in fast current environments. I will discuss another approach for dealing with fast current conditions shortly.

Open Water Oil Containment System (OWOCS)

Oil recovery actions involve removing oil from the water's surface by mechanical devices commonly referred to as skimmers. While there are many kinds of skimmers, they can generally be divided into two groups in terms of their intended mode of operation. Some are intended to recover oil from a thickened pool created by a containment boom. Others are designed to function on the unconfined slick. There is presently no one skimmer than can perform well over the wide range of oils and conditions that occur. The majority of open ocean recovery units can be expected to function in three to five foot seas and currents or speeds of advance less than about 1-$\frac{1}{2}$ knots. An open water skimming device developed for the Coast Guard was found to recover oil satisfactorily in 10 to 12 foot seas under the particular conditions at the IXTOC I well blowout and is therefore considered to represent state of the art systems. This system essentially incorporates a skimmer into the open water containment booms previously mentioned. Two tow vessels and a storage container for the recovered oil are generally needed to operate a skimming barrier. Another vessel may be needed to tend the container for holding recovered oil. All of the vessels would be required to function with control at one knot to reduce losses under the barrier. Support requirements are therefore considered to place limitations on this system. The same limitations are however expected to be found on any subsequent system that may be developed.

The need for vessels having very low speed towing and maneuvering capability to support either a skimming barrier or any other open ocean recovery system raises a serious problem. This will most likely be the driving factor in a major response effort. There is simply a low availability of this type of vessel around the U.S. To alleviate the problem somewhat we are investigating the feasibility of using Coast Guard boats and vessels. This may require that, to the extent practical, the Coast Guard modify some existing vessels as well as specifically design vessels to support the environmental protection program. Still, the non-availability of vessels of this sort will be a problem for a long time to come.



The Coast Guard skimming barrier deployed between two buoy tenders during test off Galveston. The Open Water Oil Recovery System (OWORS) is being positioned by an 82-footer.

The existing limitations for recovery units functioning in areas of high current (that is when the current is more than 1½ knots) may be significantly raised in the near future. The Coast Guard is presently testing a prototype oil recovery vessel which was shown to have the potential for recovering oil in currents of up to eight knots during full scale mockup testing. This device is designed for harbor use. If successful, however, it may be possible to extend this concept to open water situations.

An alternative to oil spill recovery is redistribution of the oil in the water and/or air. This alternative must be considered since there will be times when it will not be possible to accomplish mechanical recovery. The most promising dispersal technique, from a purely technical point of view, appears to be the use of chemical dispersants.

Chemical dispersants remove oil from the water surface and suspend it as tiny droplets in the water column. This usually results in diminished movement of the oil. It also presents a greater oil surface area for naturally occurring oil degrading microbes to work on. The use of chemical dispersants might be contemplated to protect an environmentally sensitive area, to reduce a potential fire hazard, or when weather conditions make the use of oil recovery devices impossible. There is controversy regarding dispersant effectiveness and the ecological effects of adding them to an already stressed environment. This problem is currently being addressed by the Environmental Protection Agency. The stocks of dispersants currently within the U.S. are believed to be quite limited. Further, although application techniques have been developed for spraying from surface vessels, and from both helicopter and fixed winged aircraft, there are few vessels and aircraft available within the U.S. that have been modified to spray dispersants. We are currently developing a logistical response plan for dispersant operations. This will better identify our need for taking further steps to ensure

(continued)

that dispersants can be used effectively when needed.

There are a number of locations in the country where winter temperatures will quickly cool unheated oil to the point where it can no longer be pumped. As previously stated, there is a high potential that an improved capability to pump cooled oil can be developed. Low temperatures are therefore viewed as slowing down operations rather than prohibiting them from being carried out.

The influence of ice in varying forms of an oil spill recovery operation is complex and can be dealt with only by specific discussion of the various possible situations. It suffices to state that while conditions will tend to confine the spilled oil by natural containment and retard evaporation, the time frames over which response actions can be taken will expand. Recovery will, however, be made more difficult and on some occasions impossible.

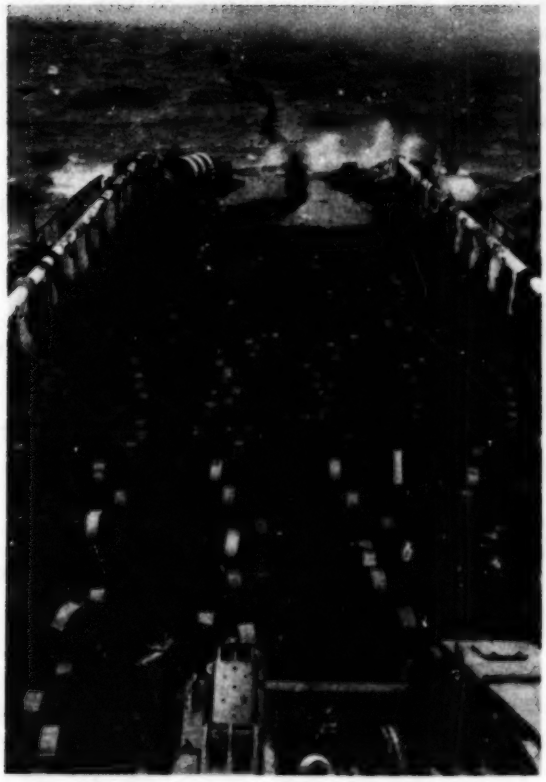
Currently there is very limited operational capability to deal effectively with an oil spill under ice conditions. It does appear that the most promising approaches involve the adaptation of equipment and procedures that have been previously developed for other purposes. Extensive field testing to validate system concepts, to identify design details requiring modification, and to develop and document operational procedures is considered an essential part of these efforts. Because of the extremes of the conditions to be dealt with, the systems proposed for development are not viewed as providing an ability to physically remove the majority, or even a substantial portion of the spilled oil in some circumstances. In order to do so in a heavily ice infested environment the use of an ice processing vessel would be required. This vessel would physically process pieces of ice, remove the oil from on and from within the ice, and then return the ice/water to the sea. In addition to the complex system required for this purpose, the vessel would require an ice-worthy hull. Development of such a costly concept is not considered justified.

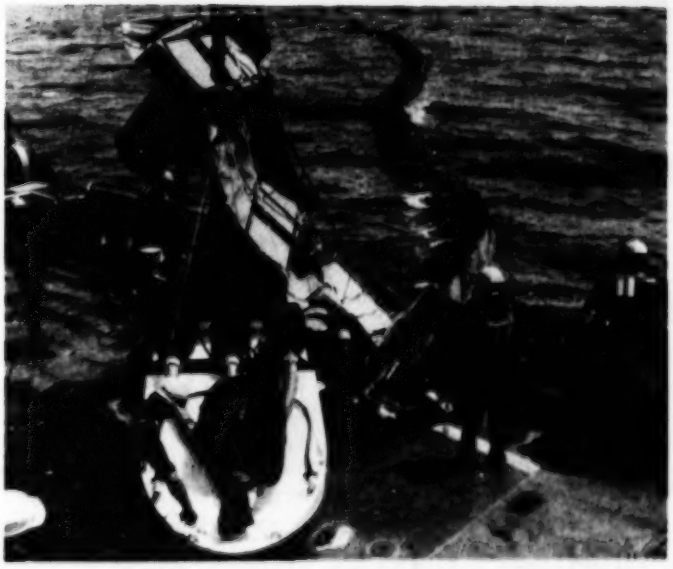
The Coast Guard's Arctic R&D program is working to improve our ability to detect, monitor, cleanup, and/or abate oil pollution in the arctic. To avoid duplication we are cooperating with Environment Canada in many areas. I emphasize however, that the removal of spilled oil under adverse conditions is difficult at best, and may well be impossible under certain circumstances, particularly when we are dealing with spills occurring in ice infested waters.

I have thus far attempted to convey to you some of the limitations we are confronted with in dealing with oil pollution incidents. I would like to close by indicating where we are in our development of an inventory of response equipment.

Presently we have major Coast Guard response equipment at three locations (with our strike teams). Our current inventory includes eighteen pumping systems for offloading oil from damaged or stranded vessels, and eleven 612 foot sections of open water containment barriers, including two of which have been modified to function as skimming barriers. We further have two open ocean skimmers designed to function within a containment barrier in up to five foot seas, and two similar devices that have been reinforced to recover oil in water containing free flowing ice. The latter are located in Alaska. In addition we have three large portable bladders for containing recovered or offloaded oil. Within the next few months we will also receive 9000 feet of boom which is designed to function in water containing free flowing ice.

We presently have funding which will permit procurement of the basic equipment (about 26 skimming barriers) to be able to recover up to 5.5K tons of oil per day or about 230 tons per hour, though additional support equipment for these recovery devices is required. We currently believe that this will be a sufficiently large inventory for the immediate future. Therefore our plans are to start distributing equipment around the country so that it will be situated in those areas considered to have a higher spill threat. We have just had such a proposal approved by the Secretary of Transportation and hope to initiate this process during fiscal year 1982.





Left: 2000 feet of Navy (Goodyear) open water boom being deployed from a commercial offshore supply boat. Above right: Fire monitors rigged aboard a tug cool the deck of the BURMAH AGATE. The drums contain foam. Lower right: Crewmen aboard a buoy tender swing the center of a skimming barrier over the side after rigging the pump float.

While I believe that we are progressively improving our ability to cope with accidents which result in spilled oil, I must reemphesize to you that there are many limitations, as I have tried to point out, and I would be less than honest if I were to leave you with the feeling that the time will come when we will be able to successfully deal with every incident that occurs. Nor is it reasonable to expect all of the oil spilled during an incident to be recovered at sea.

DECLARATION OF FEDERAL SPILLS--USE OF THE POLLUTION REVOLVING FUND

In the past year, there have been a number of oil and hazardous substance spills which have raised questions regarding application and use of the pollution revolving fund established under section 311(k) of the Federal Water Pollution Control Act (FWPCA). Coincidentally, there have been many questions as to when and to what extent a federal on-scene coordinator (OSC) can declare an incident a federal spill. Guidance on the subject is contained in the National Contingency Plan; the Clean Water Act, as amended; 33 CFR 153; Marine Safety Manual, Part 86-3; and Section P, Vol. I of the Comptroller Manual. The following amplifying information has also been distributed to the field but is worth recapping.

In most cases, the spiller is considered to be taking adequate action and it is only necessary to monitor the operations. In those cases, monitoring expenses are considered a cost of doing business and therefore are not chargeable to the spiller or to the pollution revolving fund. When the spiller is unknown, not acting responsibly, or in need of operational assistance not available commercially, the OSC has authority to declare a federal spill, activate the 311(k) fund, and take whatever control, recovery and disposal actions are necessary to insure a proper cleanup of the area. In all of these cases, the spiller is liable for all costs incurred by the federal government, including the costs of monitoring the operations. The question in this regard, which has come up most often is, "What if the spiller is acting responsibly but suitable commercial resources are not available, but federal equipment is?" That being the case, the OSC should declare a federal spill and take over to the extent necessary. This holds true even if the spiller has arranged for, and is going to continue cleanup in those affected areas for which he has available resources. The bottom line is, if it is necessary for the federal government to spend money, other than to monitor a case, a federal spill is declared, appropriate actions are taken by the OSC, and a liability is incurred by the spiller.

When all or part of a spill has been declared federal, the following are some of the costs which may be reimbursed to agencies by the pollution revolving fund, if these costs are in support of a federal cleanup effort and this support has been requested by the federal OSC. (Note-while some costs are reimburseable to the agency, all costs, including the costs of salaries of all personnel called in by the federal government to support a federal cleanup, are charged to the spiller)

a. Fuel costs of vessels, aircraft, and vehicles for all agencies
b. Repairs and/or replacement of non-expendable equipment due to damage (normal wear and tear) not caused by negligence on the part of the parent agency and while equipment is under administrative control of the OSC (this is not intended to subvert normal budgetary processes by funding replacement of major acquisition items which are accidently damaged)
c. Procurement of non-expendable equipment deemed necessary by the OSC and not otherwise available. (comments in b. apply, exercise this authority with appropriate discretion) Such requests should be transmitted to the appropriate CG district comptroller with justification. Disputes should be referred to Commandant(G-WEP).
d. Per diem, overtime and travel costs for all agency personnel
e. Rental costs, as approved by the parent agency for non-expendable equipment provided
f. Replacement costs for expendable materials provided and utilized
g. Transportation costs incurred in delivering items to and from the scene
h. Incremental operating and contract costs incurred in providing assistance to the OSC.
i. Normal salary costs of government employees in positions that are not normally intended to provide services in support of response operations.

The agency involved in the procurement of supplies, equipment, or services in

support of a federal spill cleanup operation may, upon authorization of the OSC, purchase materials or services with costs chargeable directly to the revolving fund, in lieu of using that agency's operating expenses with subsequent reimbursement from the fund. The required accounting services will be provided by the Coast Guard.

Care must be taken during all removal operations to insure no misunderstandings develop between the OSC and other federal and state representatives regarding reimbursement of funds expended for removal activities. In the case of states, districts should seek formal agreements reflecting all aspects of joint cooperation in removal activities. Agreements should clearly and specifically establish the mechanisms involved with state reimbursement.

Funding of scientific work such as scientific investigations or damage assessment studies, not in support of removal activities, will be provided by the agency with legal responsibility for such specific actions. However, efforts to identify particularly environmentally sensitive areas and to evaluate alternative defensive measures are considered Phase III activities ("Containment and Countermeasures") and are therefore reimburseable from the 311(k) fund.

On recent cases, some confusion has existed regarding the Coast Guard's obligation to conduct restoration activities. These activities are the responsibility and financial burden of the appropriate government agency, discharger or individual affected. Coast Guard policy, based upon definitions in the FWPCA, states that removal operations include any activities which are required to repair unavoidable damages resulting from necessary removal actions. As an example, the replacement of oiled beach material or replanting of oiled shoreline vegetation is not chargeable to the fund. But, damages to a boat ramp or vegetation caused by removal operations, and not as a result of the pollution may be repaired.

The question has been raised concerning the extent to which the 311(k) fund is available to remedy the problem of abandoned hazardous waste sites. If a particular dump site is leaching or poses a substantial threat of leaching into navigable waters, the fund can be used to support the effort to mitigate the effects of the pollutant and to stop the discharge from entering the navigable waters, provided the pollutant contains oil or a designated hazardous substance. Once the flow or threat has been abated, the on-scene coordinator must make an operational decision, based on the threat of future leaching, as to when the emergency cleanup effort ends and the problem of disposing of a chronic health hazard posing no immediate threat to the navigable waters begins. Under normal circumstances, the 311(k) fund should not be used for mitigatory actions beyond the emergency cleanup phase.

Laborers clean South Padre Island beaches.

It is strongly recommended that OSCs seek the advice of the appropriate Regional Response Team (RRT) when dealing with such incidents. The problem of identifying specific funding for handling the portions of the cleanup not covered by the pollution fund should also be taken to the RRT for resolution. The need for close coordination on the RRT with affected states cannot be overemphasized.

(continued)

Another question on hazardous chemical spills is, "What if I have a case which I consider a substantial threat, or there is actual involvement of the navigable waters, but I don't know what chemicals are involved?" In these situations, you may take emergency actions using the fund. Such actions would include determining what chemicals are involved. If you determine the chemicals are not designated hazardous substances, use of the fund must cease, and the remaining necessary actions must be taken using another source of funds. It must be emphasized that this policy is intentionally broad to allow OSCs to initiate actions without hesitation in cases where it is unclear as to what they are dealing with. The policy should not, however, be abused.

It should be stressed that in order to receive reimbursement and to provide for proper documentation for cost recovery, each agency is responsible for providing complete documentation to the OSC in the manner prescribed by the Coast Guard, the administrator of the fund.

CHEMICAL RESPONSE DATA SHOULD BE INCLUDED IN 'SKIM' INVENTORIES

By: LT(jg) James Vieira
Pollution Response
Branch

The Spill Cleanup Equipment Inventory System (SKIM), the computer based inventory of equipment available for pollution response, has now been operational for over one year. Field units have had an updating capability since September 1978. SKIM was developed as a self-taught system with interaction by question and answer between the operator and computer. All indications are that the system is working well with sporadic problems being referred to G-WEP-4 for resolution.

MSOs and COTPs are strongly encouraged to update their area inventories on a routine basis. Chairmen of Coastal Regional Response Teams are expected to contact the federal and state Regional Response Team representatives biannually, to update inventories of equipment from those sources. Changes in the inventories should be passed on to the appropriate federal on-scene coordinator for inclusion in SKIM.

Special emphasis should be placed on gathering data for chemical spill response. Particular attention should be given to analytical laboratories, industrial hygienists and toxicologists. Analytical laboratories should be listed under category (Y), now titled Equipment for Scientific Analysis or Laboratory Facilities. Industrial hygienists and toxicologists under (S), Safety Equipment, Clothing or Specialists.

The strike teams were recently provided terminals and updating capabilities for their equipment listings. Printouts of this information can be obtained from local terminals by choosing Program A, the appropriate area code [AST=Hampton Roads(HMR); GST=Mobile(MOB); PST= San Francisco(SFC)] and the government sector (D).

Requests,from other than Coast Guard or federal agencies involved with the National or Regional Response Teams, for printouts from SKIM can be provided on a cost reimbursable basis (Form CG-3621). Charges for copies of existing printouts are outlined in Title 49 Code of Federal Regulations (Subpart H 7.93). Charges for printouts which are being run solely for a requesting party, can be found by dividing the TYMSHARE Response Unit, (TRU) provided at the end of each printout by four. Processing costs should be added in each case. A copy of Form CG-3621 is to be mailed to G-WEP-4 for any printouts for which reimbursement will be received.

ON SITE OIL SENSORS: TEST ON RIVER ROGUE COMPLETE FINAL SYSTEM AND FIELD TEST BY '82

By: LT(jg) Michael Young
Surveillance and Monitoring
Branch

The need for the ability to detect oil on the water, regardless of time of day or weather conditions, has been recognized for some time. To meet this need, the Coast Guard has developed a prototype oil sensor system. *In Situ* (on site) oil sensors utilize the reflectance of infrared radiation or the fluorescence caused by ultraviolet radiation to detect oil on the water.

Sensors may be positioned on or near the water by several different methods. When a sensor detects oil within its area of coverage, an alarm is set off on a control panel, located at the appropriate Coast Guard unit. Personnel from the unit would respond to the area around the sensor to confirm the presence of oil and take proper action.

The test evaluation of on site sensors, on the River Rogue in Detroit, has been completed. Problems with the telemetry and display units, and the need for a battery powered sensor were identified. The necessary development is expected to be initiated in 1980. Completion of the final sensor system and the field evaluation are expected by early 1982. Installation of the system in selected ports and harbors will begin that same year.

PUBLISHED IN FEDERAL REGISTER

CONTINGENCY PLAN OUTLINES FEDERAL RESPONSE MECHANISM

The National Oil and Hazardous Substances Pollution Contingency Plan establishes the U.S. system for spill response. This organization is frequently confusing for people not familiar with the plan, particularly on those cases where the federal government is performing the containment and cleanup operations. The following brief description of the program may aid in understanding the relationships between the various agencies and response teams involved in a spill.

The federal spill response mechanism in the United States, which responds to oil and hazardous substance spills into the waters of the U.S., is designed to discover spills through surveillance, provide for timely notification of all those charged with responsibilities, evaluate the situation, and initiate immediate containment actions and countermeasures and provide for cleanup, mitigation and disposal should the discharger be either unknown or inadequate to the task.

In place and operative are the National Contingency Plan, regional and local plans, a Coast Guard manned National Response Center for notification of incidents and dissemination of information, a cadre of predesignated on-scene coordinators from the Coast Guard and the Environmental Protection Agency, a Coast Guard manned National Strike Force and an EPA Environmental Response Team to provide advice and assistance to the on-scene coordinators.

The National Oil and Hazardous Substances Pollution Contingency Plan "provides for a pattern of coordinated and integrated response by 12 departments and agencies of the federal government to protect the environment from the damaging effects of pollution discharges." The 12 are: Environmental Protection Agency; Departments of Transportation(USCG); Commerce(NOAA); Interior(FWS,USGS); Agriculture(USFS); Defense; State; Justice; Health, Education and Welfare(PHS,FDA); Labor(OSHA); Energy and Federal Emergency Management Agency.

As provided in the national and regional plans, the Coast Guard is charged with providing the federal pre-designated on-scene coordinator (OSC) in the coastal regions of the U.S. (U.S. EPA has that responsibility in the inland regions).

(continued)

The OSC is that individual having complete federal responsibility for on-scene actions to prevent, contain, assure clean-up of, or otherwise mitigate spills of oil or hazardous substances which affect, or threaten to affect, U.S. waters. Contingency plans delineate the exact boundaries of each OSC. The OSCs maintain sub-regional contingency plans and a group of well trained personnel to respond to spills or threats of spills. Each OSC is a senior grade Coast Guard officer, or EPA official, trained in pollution response.

Another important element of the National Plan is the provision of Regional Response Teams (RRT) to conduct pre-planning, prepare Regional Contingency Plans and to provide the federal OSC with advice and assistance during a pollution incident or threat of pollution. RRTs consist of regional representatives from the 12 agencies mentioned above and the states.

The National Response Team (NRT), performs roles similar to those of the RRTs but of course, at the national level. Membership is similar to the RRTs except for state representatives. This team normally functions at the National Response Center at USCG Headquarters, Washington, D.C. National and international contingency planning and the provision of large scale resources are but two of the important roles of the NRT.

The Coast Guard fits into the National Contingency Plan as follows: working under the Office of Marine Environment and Systems, the Chief of Marine Environmental Protection Division is the Coast Guard vice-chairman to the NRT. Working under each of our Coast Guard District Commanders is a Chief of Marine Safety who is the Coast Guard co-chairman of each of the RRTs. Our Captains of the Port, strategically located throughout the U.S., and who work for the District Commanders, are our predesignated OSCs.

For more information, interested persons should obtain a copy of the National Contingency Plan (40 CFR 1510). This contains a thorough explanation of the federal response mechanism. Amplifying information on the role of the Coast Guard may be obtained by calling (202/FTS) 426-9568 or writing: Commandant (G-WEP-4/12), U.S. Coast Guard, Washington, DC 20593

FOR OILY AND NOXIOUS CHEMICAL WASTES
PORTS, TERMINALS MAY SOON HAVE TO FACILITATE DISPOSAL

By: LT George Santa Cruz
Environmental Coordination Branch

Ports and terminals may soon be required to provide adequate facilities for the reception and disposal of ship generated oily wastes, and later for noxious chemical wastes. This requirement for the provision of reception facilities is a result of the 1973 International Convention for the Prevention of Pollution from Ships and its 1978 Protocol which incorporated and modified the convention. The year the Protocol will come into force internationally is uncertain, however, Resolution I recommends that all governments concerned adopt a target date of June 1981.

In the U.S., the 78 Protocol was transmitted to the Senate for advice and consent on 19 January 1979. To date, the Senate has not given its consent. On 11 December 1979, the Bill to implement the Protocol, "The Act to Prevent Pollution from Ships" (S.2118), was introduced in the Senate and was referred to the Senate Committee on Commerce, Science and Transportation. Prognosis seems fair that the implementing legislation will be enacted during 1980.

The requirements of the 1978 Protocol broaden earlier objectives for dealing with oil pollution from ships. These requirements apply to the full range of petroleum oils broadly defined as petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products. This broad definition is a major advancement in the international regulation of the discharge of oil. With respect to the discharge of oil at sea, the Protocol maintains substantially similar criteria to those specified in the 1969 Amendments to the 1954 Oil Pollution Convention except the maximum quantity which is permitted to be discharged has been reduced.

All ships carrying oil will be required to retain on board oil and oily mixtures which they cannot discharge at sea in accordance with the Protocol. These oily wastes which are retained on board must be discharged ashore to reception facilities. Parties to the Protocol are obligated to ensure the provision of adequate reception facilities in ports for vessel generated oily wastes.

Regulation 12 of Annex I of the Protocol requires oily waste reception facilities, adequate to meet the needs of ships, must be provided in:

- All ports and terminals in which crude oil is loaded into oil tankers which have completed a ballast voyage of not more than 72 hours or not more than 1,200 nautical miles.
- All ports and terminals in which oil other than crude is loaded at an average quantity of more than 1,000 metric tons per day.
- All ports and terminals which handle ships provided with sludge tanks.
- All ports where ships may have oily bilge waters and other residues to discharge.
- All ports having ship repair yards or tank cleaning facilities.
- All loading ports for bulk cargoes where combination carriers may have oily wastes to discharge.

The "Act to Prevent Pollution from Ships" authorizes the Secretary of Transportation, after consultation with the Administrator of the Environmental Protection Agency, to establish criteria for determining the adequacy of a port or terminal's reception facilities and to establish procedures to certify the facilities as adequate. In addition, the bill also calls for the Secretary of Transportation to deny entry, except in cases of force majeure, to a seagoing ship required by the Protocol to retain oil on board, if the port or terminal involved is one required by the Protocol to have adequate reception facilities, but is not certificated.

The Bill is rigid, and rightly so, in its intent to provide adequate reception facilities. Yet it is sufficiently flexible to permit a regulatory scheme which will allow equitable and reasonable enforcement while reducing the threat to our environment by operational discharges.

The methodology for determining the adequacy of port reception facilities should be based on the mix and volume of ship types anticipated by a port and the quantity of oily wastes and residues which each type of ship must retain on board to meet the provisions of the Protocol. In determining the adequacy of reception facilities, it is recommended that port officials consult the publication "Guidelines on the Provision of Adequate Reception Facilities in Ports, Part I (Oily Waste)" prepared by the Marine Environmental Protection Committee of the Intergovernmental Maritime Consultative Organization. This publication provides general guidelines for determining the volume of wastes generated on different types of vessels and the capacity of reception facilities required to handle these volumes. The guidelines were developed taking into account a step by step analysis of the Protocol and based on the quantities of oily wastes which could not be discharged to the sea. The "Guidelines" are available from IMCO, Publications Section, 101-104 Piccadilly, London, England W1V OAE at a cost of three pounds sterling.

The provision of adequate reception facilities required under Annex I of the Protocol is a pivotal element of the 1978 Protocol, for without the facilities, it becomes meaningless to require the retention of oil on board. It is with this in mind that the Marine Environment Protection Committee (MEPC) of the Intergovernmental Maritime Consultative Organization (IMCO) has taken every opportunity to promote the provision of adequate reception facilities at the earliest practical date.

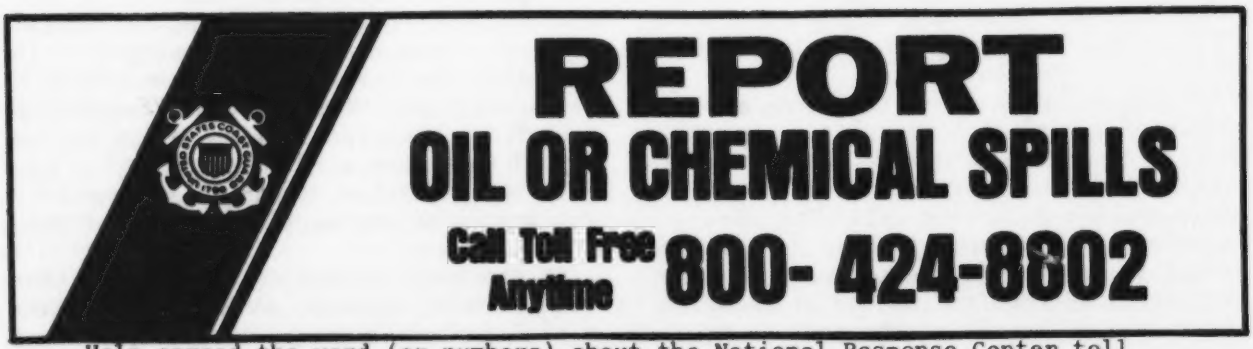
At the twelfth session of the MEPC (November 1979), several documents were submitted including one by the International Federation of Shipmasters' Association (IFSMA) which highlighted the difficulties encountered by shipmasters in complying with the 1954 Oil Pollution Convention due to inadequacy of reception facilities for oil residues in certain ports. With regard to these difficulties, the MEPC made the following comments and suggestions:

(continued)

1. Governments should be urged to supply information to IMCO on the names of ports at which ships encountered difficulties in disposing of oily residue to shore facilities.
2. Governments should encourage each port or other appropriate authority to make available to ship agents information on existing mobile and stationary facilities.
3. Authorities should be encouraged to provide, or improve, means for collecting, transporting and treating oily wastes received from ships.
4. Costs for receiving wastes should be covered in such a way that fees, if charged, would not provide a disincentive for shipmasters to utilize reception facilities.
5. Formalities for the use of reception facilities, particularly customs formalities, should be as simple and expeditious as possible in order to avoid undue delay of the ship.
6. Shipmasters should, well in advance of the ship's arrival, inform ship's agents and/or port authorities of the types and quantities of wastes to be taken to reception facilities.
7. Shipowners should be encouraged to employ improved methods for minimizing the quantities of wastes to be disposed of at reception facilities, such as the reduction of the volume of contaminated bilge water by using efficient separating/filtering equipment, the purification of recovered oil and re-use of such oil, incineration on board, etc.
8. Shipowners should also be encouraged to install on their ships oily-water separating/filtering equipment capable of producing an effluent not exceeding 15 ppm as soon as possible.

The U.S. was a leader in the development of the 1973 convention and its 1978 Protocol and will be looked to by other countries for early compliance.

Information contained in this article is important to the entire marine community. It is recommended the article be disseminated through COTP and MSO newsletters to the maritime industry. Detailed information and limited copies of the 1973 Convention and 1978 Protocol may be obtained by contacting Commandant (G-WEP-2/12), (202) 426-9573 or 74. Information relating to the status of the implementing legislation may be ascertained from LCDR Williams, Commandant (G-LLX/33), (202) 426-1467.



Help spread the word (or numbers) about the National Response Center toll free telephone number with the new NRC bumper sticker. The sticker, shown above (actual size is 12"x3"), is available for distribution to the public and for use on your official or personal automobiles. If you would like a supply, please contact:

Commandant (G-WEP-4/12)
U.S. Coast Guard
2100 2nd St. SW
Washington, DC 20593 Tele: (FTS/202) 426-9568

IXTOC I: A MASSIVE RESPONSE TO A MASSIVE SPILL

The blowout of Mexico's exploratory well IXTOC I in the Bay of Campeche on June 3, 1979, was not only the beginning of probably the world's largest oil spill, but also the start of the largest spill response in U.S. history. Although U.S. involvement at the well head was minimal, the forces mounted in Texas totaled hundreds and drew personnel and equipment from a variety of federal and state agencies, as well as commercial spill cleanup contractors. By October of 1979, a shift in Gulf currents had prevented more oil from reaching Texas and many personnel had returned to their normal duties. Cleanup equipment was also pulled from the water and staged for possible future use. However, IXTOC I has continued to spill oil despite extensive efforts to cap the well and slow the discharge. Currents may soon shift returning to a system that will likely carry oil northward toward U.S. waters and the Gulf Coast.

The blowout of the well was of interest to many, particularly to member agencies of the National and Regional Response Teams. Representatives of those 12 agencies and Gulf coastal states monitored the initial efforts to bring the well under control and studied the drift of the spilled oil and its probable movement to the U.S. This potential materialized into a very real threat to the Texas coastline, requiring the Coast Guard Federal On-scene Coordinator in Corpus Christi to assemble a multi-agency task force as called for in the National Oil and Hazardous Substances Pollution Contingency Plan; this was done almost a month before oil began washing up on South Padre Island.

The scientific contingent, under the direction of the National Oceanic and Atmospheric Administration, began assessing the relative sensitivity of the various environments and resources along the Texas coast, beginning at the Mexican border. This information was used to determine possible cleaning and response strategies. Samples of the drifting oil were also gathered for analysis and study to determine the physical characteristics of the oil when it reached the U.S. and also whether chemical dispersants would be effective in dissipating the oil in its weathered form.

Most of the scientific group (federal, state, and local) believed the oil was likely to have a minimal effect on the hard-packed fine sand beaches of the islands which form a natural barrier along the coastline. However, the very sensitive estuarine and breeding areas in the Laguna Madre behind the islands merited protection to the maximum extent possible. Further, the Environmental Protection Agency determined the effectiveness of chemical dispersants would be questionable due to the weathered condition of the oil. With this in mind, and a very strong desire not to aggravate the problem of beach erosion, the response strategy was formalized. Oil containment and collection booms would be placed in the passes and inlets through the barrier islands in a concentrated effort to protect, as much as possible, the sensitive environment of Laguna Madre. Weathered oil washing ashore in clumps and tarballs could be cleaned from the beaches and first priority would be given to the areas where oil represented an economic or significant environmental threat.

So far, the strategy has worked relatively well. Collection and cleanup operations were coordinated by the National Strike Force (NSF). Oil boom and skimmers belonging to U.S. Navy Supervisor of Salvage were deployed in the inlets, along with commercial contractor boom. These measures were apparently successful in minimizing pollution in Laguna Madre and most of the oil was either collected and recovered by this equipment or removed from the beaches by cleanup crews or storm tides. The state and counties provided key assistance in beach access and disposal of the oil, oily sand and debris.

Although it may be too early to know the extent of environmental damage, the observable effects on wildlife have been minimal. Potential harm to waterfowl was one of many special concerns last summer. In preparations for this, the U.S. Fish

(continued)

and Wildlife Service established bird cleaning stations and brought in experts to train volunteers in proper care and cleaning of oiled birds. The number of waterfowl in the area was not great at the time, and impact has been minor.

Severe damage to the shrimping and fishing industry was also a fear voiced by a number of people. The Food and Drug Administration and the National Marine Fisheries Service, along with state agencies, has monitored both shrimp and fish catches for possible increased hydrocarbon levels.

Perhaps the most serious impact of the spill was felt by the tourist industry. Unfortunately, some exaggerated and erroneous reports of "waves" and "massive slicks" of oil kept many vacationers away from Padre Island. Throughout the operations, cleanup of popular beaches was given top priority and beachgoers experienced relatively little inconvenience from the oil.

As in many spills, however, the total environmental or economical impact may not be known for some time, if it is ever known. Since much more study will be required, NOAA, coordinating a combined federal and state agency effort, is engaged in extensive environmental damage assessment work along the Texas coastline and within Gulf waters.

Regular overflights have continued to monitor the well site and Gulf waters, north to the Corpus Christi area. Latest reports indicate no immediate threat to the southwest Texas coast, but that situation could change as the currents continue shifting. There has been little cleanup conducted at the well since last fall, although our flights have observed vessels spraying chemical dispersants on the oil on several occasions.

Installation of an inverted funnel-like device over the well to collect oil, nicknamed "Operation Sombrero", was reported to be partially successful. The device was damaged by severe weather however and Petroleos Mexicanos (PEMEX) has returned it to an engineering firm in Texas for modifications and repair.

Predictions of long term impact on the U.S. of course would be based on the success or failure of well capping operations. Many conflicting reports, and unfounded speculation concerning the status of operations and their potential for success, have tended to present a confusing picture of the actual situation. Apparently, the two relief wells have established communication with IXTOC I, but it is not known if the well can be brought totally under control. Our latest over-flight reports, however, indicate there has been a definite reduction in the discharge rate.

Even if the well is capped in the immediate future, millions of gallons of oil already have been spilled. Scattered patches and streamers of oil have been distributed in the Bay of Campeche by winds and currents. Much of this oil has evaporated and degraded naturally. Some has been dispersed by the application of chemicals and a portion has very likely contaminated Mexican beaches. Despite this, the remaining weathered oil still presents a potential threat to the U.S. Gulf coast.

In anticipation of further impact, the Federal On-Scene Coordinator for Texas' southwest coast, is re-assembling agency personnel and equipment for possible oil removal operations. Response strategy is essentially unchanged. NSF personnel have assisted the OSC in coordination and logistics of response equipment and personnel and USN Supervisor of Salvage equipment has been staged at the major inlets along Padre Island.

Experience has shown that efficient oil recovery in these areas of fast current is difficult, even with the best equipment available. In these situations, when currents exceed one knot, oil will be carried under the barriers regardless of their depth in the water. Rigging of deflection booms at an angle with the current improves the performance of booms in these areas but usually does not allow one to collect all of the oil which might enter the passes. This problem is increased if significant quantities of oil sink and are carried beneath the waters surface. (Although particles of oil were determined

to be sinking last year, it doesn't appear as if large quantities of oil entered Laguna Madre as a result.)

The federal spill response program is still relatively young and despite the possible detrimental effects of the oil there were some benefits achieved and lessons learned.

The unique waiting period before oil reached the U.S. allowed and demanded detailed, comprehensive planning for movement and siting of equipment as well as identification and verification of resources that would or might have to be used. The experience and knowledge gained on this incident can certainly be applied to other massive spills.

The federal and state agencies on the Regional Response Team, for Federal Region VI, and agencies on the National Response Team were provided with an opportunity to interact with each other, pooling resources to assist the OSC and his task force on-scene over a period of months. This of course allowed agency representatives to gain invaluable practical experience that otherwise might not have been possible.

Methods and techniques for forecasting oil movement were also exercised extensively by the Coast Guard Oceanographic Unit and NOAA. Monitoring of the actual movement was accomplished by a variety of methods, including satellite tracking. This data was then compared with forecasted oil trajectories to "hone" the technique. Accurate forecasting was a useful tool for preplanning and staging of equipment.

The spill also provided an opportunity for the first operational tests of the Coast Guard's skimming barrier, on an actual open sea spill. When in use at the well site, the equipment exceeded our expectations but, at the same time, we were able to identify areas that needed refinement. When used off Padre Island in an effort to recover old, viscous, weathered oil the pumps clogged, confirming something we had suspected but had not been able to test under actual spill conditions.

There are too many positive effects of the spill to list here, to say nothing of the knowledge gained by the scientific community, but one other item does justify comment. For several years we have had a Joint Contingency Plan with Canada to guide a combined response effort along our northern border. No such plan exists between the U.S. and Mexico, although such a plan had been proposed. Now, however, the diplomatic and political impact of this spill has renewed efforts to establish an operational plan for future incidents, should they occur. Modern equipment and efficient techniques are important in pollution response but their value can be multiplied by effective contingency planning before spills occur.

CONTACTS FOR NAVY SALVAGE ASSISTANCE

Experience has indicated the potential for spills of oil and hazardous chemicals resulting from vessel casualties can be greatly lessened if the incident is handled as a salvage case from the outset. Consequently, it is important to call for a salvage expert as soon as it appears a vessel casualty might result in a pollution incident. The following list provides contacts which may be of assistance to you during such cases. Past cases have demonstrated that the U.S. Navy Supervisor of Salvage is ready, willing and able to provide excellent support in this area of pollution response.

Chief, Naval Operations (CNO) Washington, D.C.: CDR Stan Gastar (202) 695-1150, CNO Duty Officer (202) 695-0231
COMNAVSEASYSCOM Washington, D.C.: CDR C.S. Maclin, Mr. Dale Uhler, Mr. Jerry Totten (202)-697-7403; NAVSEA Duty Officer (202) 692-7527
COMNAVSURFLANT Atlantic Fleet Salvage Officer, Norfolk, Virginia: LCDR Michael Maloney (804) 444-5991; Harbor Clearance Unit Two, Little Creek, Virginia, LCDR Rob Wells (804) 464-7404
COMNAVSURFPAC Pacific Fleet Salvage Officer, San Diego, California: CDR Bob Bornholdt (714) 437-2349; Harbor Clearance Unit One, Pearl Harbor, Hawaii, LCDR Art Irwin (808) 433-3123
Message Infor Addees: CNO Washington, D.C.; COMNAVSEASYSCOM Washington, D.C.
East---CINCLANTFLT Norfolk VA
COMNAVSURFLANT Norfolk VA
HCU Two
West---CINCPACFLT Pearl Harbor HI
COMNAVSURFPAC San Diego CA
HCU One

EPA PUBLISHES 'REPORTABLE QUANTITIES' FOR HAZARDOUS SUBSTANCES

By: LT C.M. Henkel
Pollution Prevention and
Enforcement Branch

On 29 August 1979, the Environmental Protection Agency (EPA) published final regulations in 40 CFR 117 determining "reportable quantities" for 299 hazardous substances (44 FR 50766-79). EPA was required to issue regulations designating hazardous substances (substances other than oil) by 33 USC 1321 (b)(2) [Section 311 (b)(2), FWPCA]. The statue envisioned the regulations being issued within two years of the 1972 FWPCA. However, the complexity of the task and lengthy litigation involving the chemical and transportation industry delayed the regulations for about seven years.

EPA first issued final hazardous substance regulations on 13 March 1978 (43 FR 10474). These regulations were: 40 CFR 116, which listed 271 hazardous substances; 40 CFR 117, which determined which of the 271 were actually removable from water; 40 CFR 118, which listed the "harmful quantity" determination for each substance; and 40 CFR 119 which established units of measurement and rates of penalty for them. 40 CFR 117,118,and 119 were effectively voided by the decision in MCA v Costle, decided by the Federal District Court for the Western District of Louisiana on 4 August 1978. However, the decision did not overturn the designation of the 271 hazardous substances in 40 CFR 116. EPA pursued a legislative change to the FWPCA to correct the problems presented by the MCA v Costle decision. Congress passed these 1978 amendments on 2 November 1978 (P.L. 95-576). As a result of the changes in the statute, EPA no longer had to determine "harmful quantities" under various circumstances, but needed only to determine "quantities which may be harmful" based on the toxicity of a substance to the marine environment. The 1978 amend ments also deleted the need for EPA to determine which hazardous substances are actually removable from water, and to establish units of measurement and rates of penalty. The statute also added three exclusions to the definition of discharge under section 311 (a)(2) of the FWPCA to avoid double penalties against facilities with NPDES (section 402 FWPCA) permits. Finally, the 1978 amendments changed the maximum penalty amounts to $50,000 for hazardous substance discharges, and $250,000 for such discharges involving willful negligence or misconduct. This penalty may be pursued by EPA through court action, but only if no penalty is assessed for the same discharge by the Coast Guard under section 311(b)(6)(A) of the FWPCA (maximum of $5,000).

After the 1978 amendment, EPA re-published 40 CFR 116, revoked 40 CFR 117, 118, and 119, and proposed a new 40 CFR 117 which would set the "quantity which may be harmful" (or "reportable quantity") for each hazardous substance (44 FR 10266-84, 16 February 1979). By this same publication, EPA added 28 more hazardous substances which brings the current list in 40 CFR 116 to 299 hazardous substances.

With the re-publication of 40 CFR 116 on 16 February 1979, the Coast Guard and EPA were able for the first time to act to remove or mitigate hazardous substances under section 311(c) FWPCA, but until the "reportable quantities" became effective, there could be no discharge in violation of section 311 (b)(3) of the FWPCA; no failure to report in violation of section 311(b)(5), FWPCA; and no liability for cleanup by dischargers under section 311 (f), FWPCA. The Coast Guard and EPA could, however, proceed with pollution prevention regulations required under section 311(j)(1), FWPCA, and EPA proposed such regulations on 1 September 1978 for NPDES permitted facilities (section 402, FWPCA), (43 FR 39276). The Coast Guard is currently developing regulations for hazardous substances similar to the oil pollution prevention regulations in 33 CFR 154,155, and 156.

As noted above, the EPA determination of "reportable quantities" was published on 29 August 1979 as a final rule. However, in that rule EPA delayed the effective date until 30 days after publication (28 September 1979) for everyone subject to section 311 FWPCA, except common carriers. EPA plans to issue requirements for common carriers as soon as

asible. The problem here is that com-
n carriers(trucks, trains, and some
ssels) are required by law to accept
ipments prepared in compliance with U.S.
w, which does not yet require shippers
tell common carriers they will be car-
ing the 299 hazardous substances. As
on as DOT corrects this situation (reg-
ations are pending) the hazardous sub-
ance reporting, discharge and removal
ability requirements will apply to com-
n carriers as well as onshore and off-
ore facilities and contract carriers
hose who may refuse shipments of un-
own cargos).

The Coast Guard and EPA have entered
nto a Memorandum of Understanding (MOU),
ttached to 40 CFR 117 (44 FR 50785-86),
o coordinate the dual penalty procedure
or these hazardous substances. There
ill be a considerabley higher burden
or the Coast Guard in resolving the sec-
ion 311(a)(2) exclusions and in estab-
lishing the amount of each hazardous sub-
stance discharged. The amounts for the
299 substances vary from one pound to
5,000 pounds. Also, since most of the
substances mix to some degree with water
and are not as visible as oil, there will
be problems in establishing violations.
Investigations will have to be more thor-
ough than those for oil spills. Docu-
ments and facility or vessel records such
as bills of lading, NPDES permits, and
applications for permits will be necessary
to rule out the section 311(a)(2) exclu-
sions if raised by alleged polluters, and
to establish quantities released into U.S.
waters or their adjoining shorelines.

As a result of these new regulations,
the marine environmental protection pro-
gram will increase. Substantial
effort will be required as of 28 Septem-
ber 1979 to ensure reporting, prevention,
cleanup or mitigation, and civil penalty
and removal costs collection from dis-
chargers of the 299 hazardous substances.

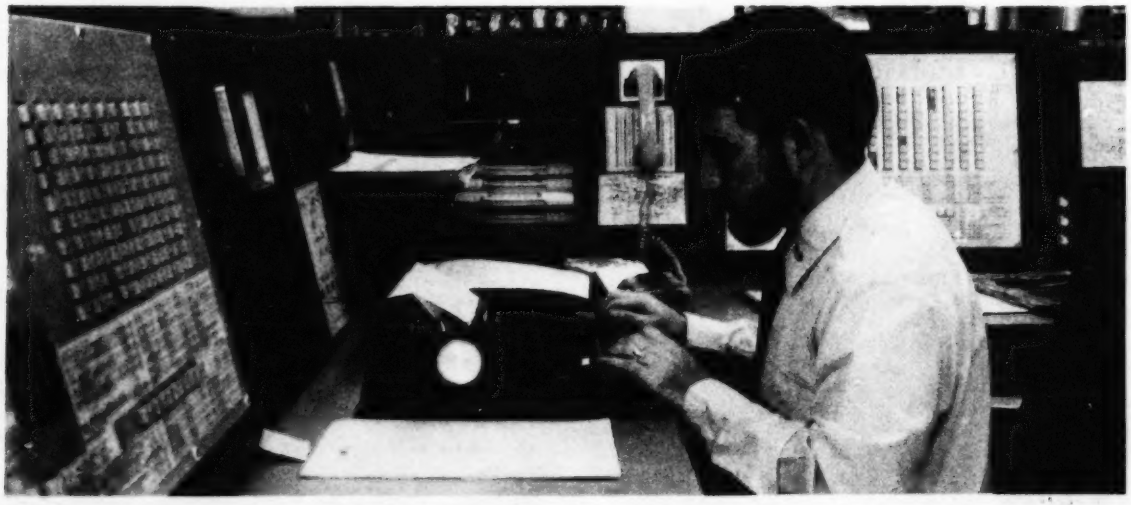
ank cars lie scattered about following a derailment on the L&N Railroad, April 1979,
ear Crestview, FL. Several hazardous substances, including chlorine, were involved.

NATIONAL RESPONSE CENTER EXPANDS WITH INCREASED WORKLOAD

By: LCDR James Clow
Chief, National Response Center
Staff

The National Response Center (NRC) is in the process of expanding to accommodate an increasing workload due to recent and anticipated changes in legislation, regulations, and in-house requirements which deal with hazardous substances, hazardous materials, hazardous wastes, pipeline discharges, and outer continental shelf oil discharges.

The NRC's workload is 250% greater than last year, and 900% greater than 1976, requiring additional duty officers and more sophisticated communications equipment if expected demands are to be met.



To meet the increasing demands the NRC embarked on a two phased expansion program last spring. Phase one is a mini- expansion (within the existing facility, and predicated on the assumption that the process will be incremental and evolutionary) to add two additional consoles and one or two additional duty officers, until a concrete assessment of the actual increasing workload can be made. Phase two will be an expansion and renovation to recreate a new NRC to meet the needs defined by the data collected in phase one, and will allow for future expansion and changes. (When initially conceived in 1972-73, the NRC was designed to be a one-time fix, with no provision for expansion!)

As of 16 January, phase one had nearly been completed. Delays by the telephone company in providing two new console call directors resulted in a seven month setback.

It is expected that phase one will be completed by early February, and that the newly-installed Hazardous Materials Emergency Response System (HMER) will be fully operational shortly thereafter. HMER is a high speed, computerized data link that will significantly improve communications among the NRC, CHEMTREC, and various chemical manufacturers.

Ultimately, it is envisioned that this system, or an offshoot of the Marine Safety Information System (MSIS), will link the NRC with CHEMTREC, Districts, MSOs, COTPs, industry experts, the Federal Emergency Management Agency (FEMA), and the states. Presently, an innovative government/industry working agreement is being drafted by the Chemical Manufacturer's Association and the Coast Guard to facilitate coordination of incidents requiring NRC/CHEMTREC assistance.

The NRC is still collocated with Coast Guard Flag Plot in the Nassif Building, but will move to the Coast Guard Headquarters building (Transpoint) after the phase two facility is designed and built.

ELECTRONIC SURVEILLANCE OF OCEAN DUMPING

SYSTEM WILL REDUCE NUMBER OF AIR PATROLS, SHIPRIDING

By: LCDR Gregory Voyik
Surveillance and Monitoring
Branch

The Coast Guard published a notice of proposed rulemaking on 13 December 1979 which calls for the installation of an electronic surveillance device on vessels engaged in ocean dumping. The implementation of the Ocean Dumping Surveillance System (ODSS) is designed to augment present labor intensive surveillance methods and provide increased surveillance over dumping activities.

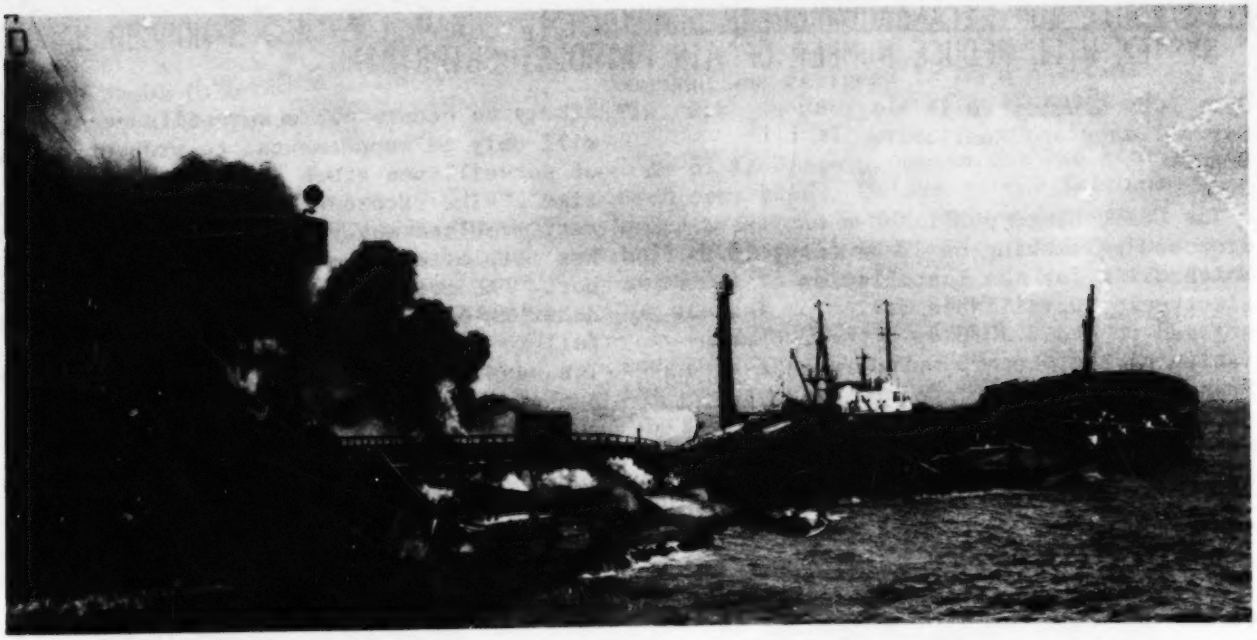
Development of the ODSS began in 1973 when the need for an electronic surveillance capability was identified. Operational tests of the first prototype device were conducted in 1975. (Previous discussion of this appeared in the Summer 1975 and Winter 1975-1976 issues of the Newsletter.) The results were encouraging; however, the need for several improvements was identified. A second generation prototype was developed and tested. Based on the satisfactory results of this testing, ODSS is now being implemented as a feasible surveillance method.

The Ocean Dumping Surveillance System consists of a Loran-C receiver, data input section, digital cassette recorder, and dump mechanism status sensors. The recorded tape can be "read" by computers and, when desired, the computer can provide a graphic display of the vessel's voyage. Through this data the voyage can be reconstructed to ascertain that the dumper travelled to the proper site and remained for a period of time consistent with the cargo load and required discharge rate. The status sensors will permit recording of the time and location of dump commencement and termination by providing signals to the ODSS to indicate whether the dump mechanisms were open or closed.

When the ODSS is adopted, our ability to conduct surveillance at night will be greatly enhanced. It will similarly enhance surveillance effectiveness during other periods of reduced visibility when, as at night, unlawful dumping is most likely to occur. This surveillance method will only be supplemental to present means of surveillance since it is not "real time". The recorded data must be retrieved and analyzed after the dumper has completed his mission and returned to port. Additionally, it does nothing to deter illegal activities by dumpers who fail to equip their vessels with ODSS. Its adoption will significantly reduce the number of vessel and aircraft patrols and shipriders needed, however.

The proposed rules published in December 1979 provide the method of implementing ODSS. The regulations require vessel operators to have an ODSS on board, to operate it according to the equipment handbook instructions, to ensure any manual data inputs are entered prior to departure, and to send recorded tapes to the Coast Guard so computer analysis can be accomplished. It is expected that each vessel engaged in an ocean dumping mission will be required to have an approved ODSS installed on board and producing a cassette tape record during the entire voyage. Certain exemptions may be permitted. For example, operations under EPA general, emergency or research ocean dumping permits may be exempt from the rules. Additionally, since there is no present Loran-C coverage in the Caribbean, ocean dumping activities there will be waived of these requirements. The regulations also include equipment performance and design requirements and an approval procedure. Because the primary purpose of ODSS is to augment present surveillance methods, it is necessary to insure the equipment is designed and works correctly.

The regulations are expected to become effective by mid-1980. In order to provide ample time for prospective equipment manufacturers to market the ODSS, an additional six month provision is included in the rules; therefore, the equipment is anticipated to be installed on vessels by the end of 1980. Additional information will be provided in the near future to districts and field units so that the implementation of this new requirement can be effectively carried out.



The burning BURMAH AGATE rests on the bottom off Galveston following a collision Nov. 1.

PUBLIC INFORMATION ASSIST TEAM UPDATE

The Pubic Information Assist Team has been operational for just over two years, working out of the Pollution Response Branch (G-WEP-4/TP12) at Coast Guard Headquarters in Washington, D.C. During that time, the team has assisted Coast Guard and Environmental Protection Agency On-Scene Coordinators (OSCs) on more than 25 instances. These cases have included oil spills from vessels and pipelines; emergencies created by illegal hazardous dump sites; and chemical spills from train car derailments. Most recently, the team has assisted the OSC and unit PIO's at Group Galveston and Marine Safety Office Galveston, Texas, during the collision between the Liberian vessels MIMOSA and BURMAH AGATE and subsequent oil spill. The members also acted as directors of the OSC's news office in Corpus Christi, Texas, coordinating and diseminating information to the public regarding the federal response to the IXTOC I well blow-out and oil spill in the Bay of Campeche, Mexico.

New members of the team are LT(jg) Don Zelazny and PA2 Dan Dewell. In addition to PAC Richard Griggs and PA1 Larry Clark, both Zelazny and Dewell are trained in journalism, public relations, photography and have a knowledge of pollution response techniques, equipment, and the laws and regulations relating to pollution incidents.

The team's primary mission is to respond to requests for assistance within two hours of notification (airline or rail schedules and highway conditions permitting). To accomplish this, at least one and usually all team members are always on call.

The Team may continue to be requested for public information assistance by OSCs, District (m) and District and Area Public Affairs Staffs by directing requests to Commandant (G-WEP-4) at telephone number (202/FTS) 426-9568 during office hours or 800-424-8802 at any time. Requests for PIAT assistance with ongoing cases, in which it is not essential that team members respond within two hours of notification, may come by way of the OSC's or Regional Response Team Pollution Report (POLREP).

If you would like additonal background on the team and its activities or have questions regarding its role, feel free to call the Pollution Response Branch. LT(jg) Don Zelazny, PAC Rich Griggs, PA1 Larry Clark, and PA2 Dan Dewell are looking forward to talking with you

NATURAL OIL SEEPAGE AND FEDERAL RESPONSIBILITY

One recurring problem for field units is natural seepages of oil. Because natural seepage is not from a vessel or facility and has occurred since the beginning of time, it might seem logical that cleanup of this oil would not be the responsibility of federal on-scene coordinators.

In 1973, the 11th Coast Guard District, which has many naturally occurring oil seeps, requested clarification of cleanup responsibility from the Coast Guard's Chief Counsel. Counsel's opinion concluded the removal of oil emanating from natural seepage,and the use of the contingency fund for that purpose, are authorized by law. However, the law does not impose an absolute responsibility on the Coast Guard to remove all oil spills.

Although several sections of the Federal Water Pollution Control Act make reference to spills from vessels and facilities, Section 311(a)(2) authorizes the President (the Coast Guard in coastal areas pursuant to the National Contingency Plan) "...to act to remove or arrange for the removal of (discharged) oil..." Removal of oil from natural seeps presents problems in some situations, since some natural discharges are beyound the capacity of present technology to control or abate. Those that are considered controllable can be a drain on unit personnel resources as well as a continuing expenditure from the contingency fund.

The final decision on natural seepage cleanup must be made locally, on a case-by-case basis, considering recoverability, location, environmental sensitivity, possible economic impact, and other factors. It is not practicable to remove all discharges.

Although the law allows the Coast Guard to remove natural seepage, it does not require the Coast Guard to clean up the ocean, but rather to do the best we can for the waters of the United States.

MARINE SAFETY SCHOOL SETS UP DISPLAY--OFFERS NEW PATCH TO GRADUATES

The Marine Safety School in Yorktown, Virginia, has hung a display board for the purpose of exhibiting unit patches. If your unit has MIO, MSO, COTP or PSS missions, the school would appreciate receiving your patch to include in the display.

The design of the school's new patch is shown here. The new patch is available to all graduates of Marine Safety School Courses. If you would like one, send your request and $2.25 to:

Marine Safety School
Attn: BM1 Mike Cobiseno
USCG Reserve Training Ctr
Yorktown, VA 23690

best copy available

DEPARTMENT OF TRANSPORTATION
U. S. COAST GUARD
WASHINGTON, D. C. 20590

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U. S. COAST GUARD
DOT-514

THIRD CLASS

☆ U. S. GOVERNMENT PRINTING OFFICE : 1980 311-586/47